

# Local medical community incorporates sustainability in its processes

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DECAM

Pollution prevention opportunities present themselves in almost every activity on Fort Carson. One such activity, Evans Army Community Hospital, in cooperation with the Directorate of Environmental Compliance and Management, has taken several steps to prevent pollution in its health care operations to provide a more healthy work environment for its staff and further Fort Carson's sustainability goal of reducing hazardous waste.

The hospital has reduced hazardous products and replaced technologies in its lab functions, sterilization technology and dental x-ray production.

The products ethyl alcohol and xylene are common chemicals used in medical facility laboratories used to prepare tissue samples for analysis. Once the chemicals have been used on the tissue samples, they must be properly disposed of as a hazardous, biochemical waste. In 2000, the DECAM purchased a xylene and alcohol distillation unit to recycle the chemicals for reuse and eliminate the need for expensive disposal. The distillation process separates the chemical liquid from the biological contaminants by heating the liquid, capturing the vapors, condensing the vapors back to liquid form and removing the contaminants. The distillation unit prevents the disposal of 348 gallons of contaminated chemicals each year and costs less than a tenth of what it costs for the purchase and disposal costs of ethyl alcohol and xylene.

Sterilization of equipment is a critical function in hospitals to prevent the spread of infection. Traditional medical sterilization has used ethylene oxide, a hazardous gas that has been linked to cancer, fetal abnormalities and chronic medical problems. The EtO gas is also costly and poses health risk to hospital workers. In 2000, DECAM purchased a sterilization system for Evans Army Community Hospital to clean their medical equipment in a non-toxic, environmentally-friendly manner by using low-temperature, hydrogen peroxide gas technology. The system produces no toxic residues or emissions because the byproducts from sterilization are oxygen and water vapor. The system cleans instruments in one hour, which is 17 times faster than traditional sterilization and is a third the cost of EtO sterilization.

The Dental Activity undertook an initiative to replace traditional dental x-rays with digital radiology. The use of traditional dental x-rays carried some risk of radiation exposure and required hazardous chemicals for processing. The digital radiography equipment DECAM purchased for four dental clinics on Fort Carson creates real-time images through an especially designed mouth guard and reduces the exposure to radiation by 90 percent over x-rays. The costs for processing digital x-rays are less than half of the cost of traditional x-rays

For more information about the Fort Carson pollution prevention initiatives, call 526-1739.